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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,235	07/21/2003	Corbin Coyes	2483CR-1	7540

22442 7590 12/15/2004

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EXAMINER

COLLINS, GIOVANNA M

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,235

Applicant(s)

COYES ET AL.

Examiner

Giovanna M. Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040301.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn '248 in view of Spears et al. '148.

Hahn discloses (fig. 1) an insert for use in a ball reciprocating downhole pump, comprising: a cylindrical tubular body forming: a through-bore and having vertically spaced apart top (12) and bottom (1) rings joined by circumferentially spaced apart ribs (2) combining to form side openings; the ribs supporting inward protruding flanges (13) have upper inner ends arching together toward the longitudinal axis of the body, and upwardly directed elongate reinforcing member(14) connected with the flanges at the upper ends the member and the flanges protruding above the upper ring. Hahn does not disclose the flanges re thing upwardly and inwardly of the flanges and the reinforcing member combing to form a semispherical ball stop. Spears (figs 17-18) teaches an insert with flanges (36) that are thinning upwardly and inwardly combined with a reinforcing member from a semi spherical ball stop (92). Spears further teaches this design increase the cross sectional flow area for the fluids flowing through a bore and decreases frictional drag and lessens the effect of the restriction to the flow of fluids (col. 7, lines 40-45). As it would be advantageous to decrease frictional drag, it would be obvious

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to modify the insert disclosed by Hahn to have flanges that are thinning upwardly and inwardly combined with a reinforcing member from a semi spherical ball stop as taught by Spears.

3. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn '248 in view of Spears et al. '148 as applied to claim 1 above, and further in view of Nixon '068.

Hahn does not disclose the ribs are inclined and shaped to form helical side openings or the flanges are helically directed. Spears teaches flanges that are helically directed. Spears further teaches this design increase the cross sectional flow area for the fluids flowing through a bore and decreases frictional drag and lessens the effect of the restriction to the flow of fluids (col. 7, lines 40-45). Nixon teaches (figs. 1) an insert with ribs that are inclined and shaped to form helical side openings. Nixon teaches this design allows the surface wear on the valve to be substantially uniform so that valve will have a smooth surface a close fit for the valve seat (page 2, lines 9-12). As it would be advantageous to reduce friction drag and have surface wear uniform to have a close fit for the valve seat, it would be obvious to one of ordinary skill in the art to further modify the insert disclosed by Hahn to have the ribs are inclined and shaped to form helical side openings or the flanges are helically directed as taught by Nixon and Spears.

Referring to claim 3, Hahn disclose the flanges (13) correspond at the base with the shaping of the ribs (2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 703-306-5707. The examiner can normally be reached on 6:30-3 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gmc


David Bagnell
Supervisory Patent Examiner
Technology Center 3670